IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

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RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, et al., Plaintiffs, v. MYLAN PHARMACEUTICALS, INC., Defendant.	:	CIVIL ACTION NO. 09-184-LPS
MYLAN PHARMACEUTICALS, INC., Plaintiff, v. GALDERMA LABORATORIES,INC., GALDERMA LABORATORIES, L.P., and SUPERNUS PHARMACEUTICALS, INC., Defendants.	:	CIVIL ACTION NO. 10-892-LPS

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Wilmington, Delaware
Friday, July 8, 2011
BENCH TRIAL - VOLUME D

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BEFORE: HONORABLE **LEONARD P. STARK**, U.S.D.C.J.

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P R O C E E D I N G S

(REPORTER'S NOTE: The following trial proceedings was held in open court, beginning at 9:31 a.m.)

good morning, everyone

(The attorneys respond, "Good morning, your Honor.")

THE COURT: We are hear for closing argument.

Mr. Flattmann.

MR. FLATTMANN: Yes, your Honor. With the Court's permission, I'd like to hand up some slides that would assist me in my closing.

THE COURT: That would be fine. I have gotten used to that practice.

MR. FLATTMANN: Yes, your Honor.

May I proceed, your Honor?

THE COURT: You may.

MR. FLATTMANN: Your Honor, on Tuesday morning, I previewed the evidence that we would adduce on direct and cross-examination, and I promised we would meet our burden on infringement, and I predicted that Mylan would fail to meet its heavy clear and convincing burden of proving invalidity of its three sets of patents. I submit we have fulfilled that promise and that Mylan had indeed failed far short of meeting its heavy burden of proving invalidity.

I'd like to go back to each of those promises and predictions and walk us through the evidence that we have adduced and trial and match our opening statement essentially to our proofs at trial.

Your Honor, it's clear that Mylan infringes all three sets of the patents. Galderma has proven infringement by a preponderance of the evidence here.

First, the Chang patent. Mylan has already conceded infringing most claims of the Chang patent, and this Court entered an stipulation and order to that effect back in March. Only asserted claims 4 and 18 of the Chang patent are still at issue. As you can see, both of those claims require steady state blood levels of doxycycline of between .3 and .8 micrograms per mil. But the evidence was clear that Mylan infringed claims 4 and 18, even before a single expert testified in this case.

The pivotal pharmacokinetic study that Mylan relies on directly in its label already shows that patients taking Mylan's drug will have steady state plasma concentrations of doxycycline between .3 and .8 micrograms per mil.

As you may recall from Galderma's opening statement, Mylan has already admitted infringement of these claims on other occasions. At the preliminary injunction hearing, Mylan's counsel acknowledged that its generic

product will result in a doxycycline concentration in patients of .6 micrograms per mil which is square in the middle of the range, and Mylan's own statement of contested facts in the pretrial order says that the mean trough concentration is .3 micrograms per mil.

THE COURT: Are either of those actually evidence on the slide there?

MR. FLATTMANN: Well, the statement of contested facts is evidence that the Court can consider because it's an admission by Mylan incorporated into the pretrial order, but I will also show the Court that these statements appear in the testimony at trial.

THE COURT: Maybe they prove that their proposed fact is not actually a fact.

MR. FLATTMANN: Well, I was going to suggest that that is what they attempted to prove, but their experts admitted it nonetheless.

In particular, as we see from this slide, Mylan's expert Dr. Chambers admitted that the Cmax concentration was .6 micrograms per mil. He did so here in open court; and he admitted that the trough concentration of Mylan's generic product was .3 micrograms per mil. That is just what Mylan said in its uncontested facts, and he verified it and confirmed that. That proves infringement.

Dr. Friend's testimony was consistent with that

as well, your Honor, yesterday.

Indeed, I think as your Honor just recognized, by the end of yesterday, after the testimony of Dr. Chambers and Dr. Friend, Mylan was essentially reduced to challenging its own statement of contested facts in the pretrial order. It even went so far as to redirect Dr. Friend on the exhibits that support its own statement of contested facts in the pretrial order in an attempt to prove that they don't support those asserted facts. That's remarkable.

Now, on top of these multiple concessions, we put in affirmative proofs. Dr. Rudnic affirmatively established that patients taking Mylan's generic product would meet the claimed steady state plasma concentrations recited in the claim of between .3 and .8 micrograms per mil, But Mylan now says that all of the blood levels must fall between .3 and .8 at all times. Now, that wasn't the Court's claim construction, and it isn't the law.

Mylan and its experts admit that the steady state trough is .3 and the Cmax is .6. Therefore, Mylan's product will admittedly fall in the range and patients will have blood levels within this range. However you parse the data, that is infringement. So as such, your Honor, we submit that Galderma has proven Mylan's infringement of claims 4 and 18 of the Chang patent by a preponderance of the evidence and infringement of the other asserted claims

has been stipulated to.

I'll turn to the infringement of the Ashley patents, but first I'd like to make a bigger picture observation. I put Mylan's 50-milligram doxycycline label for its approved 50-milligram product up on the screen.

Mylan's story concerning the Ashley patents is internally inconsistent, and it doesn't make sense.

MR. STEUER: Your Honor, this isn't an exhibit.

MR. FLATTMANN: I didn't say it was.

THE COURT: If that is an objection, it's overruled. It's a demonstrative.

MR. FLATTMANN: Right. There is abundant testimony of record concerning the 50-milligram product, and we are simply illustrating that. But their story doesn't make sense, your Honor. Mylan's expert, Dr. Gilchrest agrees with us that Oracea has sub-antimicrobial activity, but she says it isn't new. Mylan's other expert, Dr. Chambers says it doesn't even exist.

Now, we'll talk about the various admissions that contradict Dr. Gilchrest's opinions, but her basic theme is that 30- and 40-year old prior art taught that sub-antimicrobial dose of doxycycline could treat rosacea. She believes, however, that this same art taught both 40 milligrams of doxycycline, namely Oracea, and 50 milligrams of doxycycline, and that both would work as well, just as well

against Oracea, with no difference in side effects due to antimicrobial activity.

Now, Dr. Chambers apparently didn't read the same references. He believes that 40 milligrams of Oracea and 50 milligrams of doxycycline are essentially equal, and that both of those products would, in fact, act as antibiotics in inhibiting flora growth and et cetera.

But Mylan already makes a generic 50-milligram doxycycline product, your Honor. If that product is no less effective and no less safe than Oracea, as Dr. Gilchrest says, and is no more effective in avoidance of antimicrobial activity, as Dr. Chambers says, why do they need to copy Galderma's product? Why do they want to spend millions of dollars on lawyers in this litigation when they would have us believe they're already selling it in the form of the 50-milligram product? And how do they explain the tremendous commercial success that they all admit that Galderma has achieved?

Doctors don't get fooled by pharmaceutical company advertising. You can look at what Dr. Gilchrest eloquently said about this a couple days ago.

She agreed that most doctors try to prescribe the best drug for their patients and, in her view, "all physicians endeavor to make informed decisions based on information and not on advertising materials but based on objective evidence."

That is why Oracea has been successful, and that is why Mylan wants to copy.

Now, your Honor, on the strength of her own independent analysis of the data, Mylan's expert Dr. Gilchrest only first started prescribing 40 milligrams of doxycycline for rosacea after Galderma's product Oracea was approved and launched, after the product that is indisputably covered by the same patents Dr. Gilchrest now says are invalid was first invented, developed and sold.

Let's take a look at the claims and look at the evidence in a little more depth. Specifically, with regard to infringement, both Ashley patents have subantibacterial claim limitations which Mylan meets. Mylan's label says so.

The Court's construction of this claim limitation appears on the right-hand column here. This was the same construction argued by Mylan and adopted by the Court. If you compare the Court's construction of the limitation with Mylan's label in the left-hand column, we see that Mylan's proposed ANDA product meets the subantibacterial claim limitation. By example, the Court said, subantibacterial amount means it does not significantly inhibit the growth of microorganisms and the label says it should not be used for reducing the numbers or eliminating microorganisms associated with any bacterial disease.

As you may recall, Mylan's positions on this

are directly contradicted by the label. The contrast is remarkable. As Dr. Webster testified, Mylan's label reads right on the subantibacterial amount in many ways. It does so where it says that there was no detectible long term effects on bacterial flora in a number of different body cavities and tissues, it says so when it says that bacteria is not significantly reduced or eliminated, and it says so in about three or four other ways.

Now, it's not just Dr. Webster who testified that Mylan infringes the subantibacterial amount limitations. Dr. Gilchrest did, too. She repeatedly admitted that 40 milligrams a day of doxycycline or 20 milligrams twice a day of doxycycline does not alter bacterial flora. With reference to Periostat, 20 milligrams twice a day, she said it would not be appropriate to use in an anti-infection, and that it was subantibacterial. She called it a subantibacterial dose on several occasions.

So through their own experts, and through the affirmative proofs that we put in with Dr. Webster, Galderma has met its burden of proving by a preponderance of evidence that Mylan's ANDA product infringes.

Now, Dr. Chambers, I submit his continually shifting testimony on this issue or, as he termed it once on redirect, his wobble, doesn't change the basic underlying facts. He completely reversed his position and he

jettisoned all of his early arguments regarding predictions from in vitro data. He even ran from his own MIC chart. But he runs from there right into the in vivo studies, the same in vivo studies that Mylan relies on for its label claims of no significant reduction of bacteria.

He relies on a new theory that purportedly shows in vivo data of antibiotic resistance in the Haffajee article. His testimony on the Haffajee article, which Mylan did not present to the FDA and did not include on its label and did not rely on for its labeling claims, was at best inconsistent, your Honor.

He admitted on cross that Haffajee failed to show any significant inhibition of growth. To use his own words again, he wobbled when he was confronted with the Haffajee statement that the source of the observed bacterial resistance could not be determined. That that question could not be answered.

Now, Dr. Chambers criticizes the studies actually considered by the FDA and actually presented by Mylan to the FDA because they didn't have positive controls, supposedly. But he admitted, when pressed, that Haffajee didn't have a real positive control either. It didn't compare the 20 milligrams of doxycycline to any other tetracycline compound, much less a higher dose of doxycycline. In fact, your Honor, the only time that Dr. Chambers showed any

bacterial resistance at all was when it was a hypothetical example entirely unsupported by any actual data.

Your Honor, as I said, Dr. Chambers runs from the in vitro data that he had previously embraced and right into the in vivo studies that Mylan relies on for its label claims of no significant reduction of bacteria. The contrast between his testimony on these studies on direct and cross was remarkable.

On direct, he criticized all of the studies by cherry-picking data around the margins. On cross, he embraced all of them. He said they were all sound and true. He admitted they all supported the Mylan label claim. He admitted Mylan adopted all of them. That was clear from his testimony.

We saw that for each of the Skidmore, Walker 2005, Walker 2000 and Thomas studies.

And as you can see from the testimony here in PDX-822, he admitted the same thing about Walker 2005 on cross-examination. It supported the label.

Now, he couldn't run from Mylan's label either, although he tried. He tried to say that the label didn't match the claims, but on cross he admitted that the label says that Mylan's product will not reduce the numbers or eliminate microorganisms associated with any bacterial disease. He agreed with that statement. He agreed that

that matched the Court's claim construction of subantimicrobial amount. Namely, that it meant no significant inhibition of growth of microorganisms.

Now, he tried to say that FDA didn't actually agree even though they approved the label, but on cross, he admitted that FDA actually removed the word "antibiotic" from the Oracea label.

He ultimately had to admit that he was also engaging in speculation as to FDA's intentions or motives in not approving a label claim that the amount of doxycycline is "well below" a significant inhibitory amount. He didn't know what that meant or what either CollaGenex or FDA intended by that or what the motives were regarding those words.

Now, Mylan suggested that to meet our burden on infringement, we need to demonstrate its product will not significantly inhibit the growth of any of the millions of bacteria in body tissues. That, again, was not the Court's claim construction. Those words do not appear in the claim or in the patent, and that is not the standard for proving infringement.

The Mylan label says directly that its product will not reduce bacteria. It will not significantly inhibit growth in several different ways, in fact. Mylan's Vice President of Regulatory Affairs, Mr. Talton admitted in his

testimony that that is true, and that Mylan has developed no clinical data to the contrary.

Mylan has not shown that its product will significantly inhibit the growth of bacteria, of any bacteria for that matter. It must be held to its label. It must be held to what it told the FDA and what it is going to tell patients and doctors, and that establishes infringement.

So, once again, your Honor, Galderma has proven by a preponderance of the evidence that Mylan's product infringes the Ashley patents.

I'll turn to the Amin patents now.

Mylan and its experts simply failed to rebut our infringement proofs concerning the Amin patents. First of all, Mylan does not even contest and both Galderma and Mylan's experts have testified that production of nitric oxide and iNOS leads to a number of downstream effects, including vasodilation, erythema, increased microvascular permeability, leucocyte invasion, and edema.

Now, both Galderma and Mylan's experts further testified and agreed that these effects lead to the signs and symptoms of rosacea, including papules and pustules. And this is from Robbins' testimony.

Moreover, Mylan also doesn't contest, and again both Galderma and Mylan's experts have testified, that doxycycline decreases the production of nitric oxide from

iNOS. This is again Dr. Robbins' testimony and part of the statement of uncontested facts in this case.

In fact, Mylan's expert, Dr. Robbins has testified that work from his own laboratory has shown that doxycycline decreases the production of nitric oxide.

Also, Mylan's 40-milligram doxycycline generic product plainly infringes because, as its own expert Dr. Robbins has testified, the use of Mylan's ANDA in accordance with the label is effective in inhibiting the papules and pustules of rosacea, which, as we know, are the result of increased production of nitric oxide, based on the testimony of both sides' experts.

So Mylan simply could not dispute these basic facts. As a result, they can't rebut our proofs. If you use the product in accordance with the label, it will infringe.

So, your Honor, as such, we submit that Galderma has proven infringement of all three sets of patents at issue here. Mylan has already agreed it infringes most of the claims of the Chang patent. Galderma has set forth sufficient evidence that Mylan infringes the other patents and claims as well.

I'll turn to validity, your Honor.

Now, Mylan has fared no better on its invalidity defenses. That is because as to all three sets of patents,

Mylan's proofs fell short of its heavy burden showing invalidity by clear and convincing evidence. The fact that Mylan has now retooled and reconfigured and rejiggered the piles of art in the last two weeks hasn't helped. Neither did Mylan's last minute effort during trial to add and drop still more references.

I'll start with the Ashley patents. The patents are valid, and Mylan hasn't proved otherwise. It hasn't met it clear and convincing burden.

Dr. Gilchrest, on cross, testified consistently with her deposition. She had to admit none of her cited art came close to disclosing the treatment of rosacea with a subantimicrobial amount of tetracyclines, much less 40 milligrams of doxycycline.

She dropped three of her nine references to avoid their explicit disclosure of antibiotic activity, and she admitted that none of the remaining references disclosed antibacterial amounts.

She admitted that none of the new references she added to her argument disclosed subantibiotic amounts either, and that they also didn't disclose non-reduction of microflora.

Now, in view of these glaring deficiencies in their proofs, on direct, she tried to supplement the disclosures of articles like Murphy and Cotterill by

combining them with teachings from art that is nowhere listed in Mylan's statutorily required Section 282 notice. I think we exposed that attempt on cross and confirmed that the six references on which she actually and legitimately relies fall short of the claims, and so does the additional prior art that she recently added.

Now, Dr. Gilchrest says that Ashley is obvious in view of this art but she could provide no explanation for why no one developed this invention for decades after this art was published. Very tellingly, she testified that she never heard of anyone using doxycycline in an amount of less than 50 milligrams to treat rosacea, and she, herself didn't do that until Oracea was launched.

Now, let's take a look at some of her references. She admits that she is also relying on six of them now. She admits that none of them anticipate Ashley because none discloses a subantibacterial amount, and none disclose failure -- a lack of significant inhibition. None disclose anything about microflora.

Your Honor, these are glaring deficiencies in their proofs. These are critical limitations of the claim. They're not in the art. The art doesn't anticipate, by their own expert's admission.

Now, Dr. Gilchrest also admitted that none of the six references discloses the treatment of rosacea with

any amount of doxycycline. That's fairly definitive. And none disclose any antibiotic in an amount of less than 100 milligrams a day. The art was pointing in exactly the opposite direction.

Mylan continues to rely at trial on the Pflugfelder patent, although it has now been relegated to its role as an obviousness reference as opposed to an anticipation reference. Your Honor recalls that the PTO believed this to be the closest prior art but found that it was deficient and could not invalidate the claims that Mylan has pushed on.

At trial, Dr. Webster and Dr. Gilchrest both testified that Ashley issued over the Pflugfelder patent and Dr. Gilchrest in particular admitted that she dropped Pflugfelder as an anticipatory reference because it doesn't even disclose the disease we're talking about here. As she admitted, it doesn't explicitly teach a method for treating the papules and pustules of rosacea.

Now, as I have mentioned, Mylan recently added these five additional and even more distant references to support its invalidity defense. Now, although these references were cited a long time ago in one of Mylan's interrogatory responses, they have only recently resurfaced. Adding more art to the pile at the last minute didn't help Mylan meets its burden, though, because as Dr. Gilchrest

admitted, none of these new references anticipates or renders obvious the claims, and she said none of them disclose the use of subantibacterial amounts to treat rosacea. It's clear on their face, they're even more distant than what came before.

Drs. Webster and Gilchrest both testified that none of these references say anything at all about the use of subantibacterial amounts of tetracyclines to treat acne or rosacea.

The fact that Mylan felt the need to drag in these references as prior art at the last minute speaks volumes. The fact that it tried to bring in still more prior art that wasn't even on its 282 statement tells us that Mylan fully appreciates the deficiencies in its invalidity case. It's right through trial.

Now, your Honor, since the time of its paragraph 4 notice, only one reference has survived the reshuffling and the rejiggering that Mylan has engaged in: the Pflugfelder reference. Mylan has only continued to stack more art and more and more art into the pile, some that is not even on the 282 notice. I showed the Court an example of this during the cross-examination of Dr. Gilchrest.

But it's quite telling in the new art that they have cited and the non-282 art is even more distant, as Dr. Gilchrest admitted on cross. All of that art went

to antibiotic amounts, antibiotic activity, or just was silent on the topic.

Now, you will recall that Dr. Gilchrest used this chart and charts like it in an attempt to prove invalidity. These charts I think we revealed on cross showed an attempt to supplement the disclosures of the Murphy and other references at trial with so-called state-of-the-art references.

In particular, this one refers to the element, in a subantibacterial amount that reduces lesion count; and it says Murphy administered 125 milligrams of oxytetracycline for six to twelve months, a dose that will not affect bacterial flora and in sebaceous glands in the skin.

The only problem with this chart is that Murphy doesn't say anything about that. Murphy doesn't say anything about bacterial flora or bacterial flora in sebaceous glands. That is from a different reference, a non-282 reference.

When pressed, Dr. Gilchrest admitted that Murphy and Cotterill contained no mention of subantibac -- microbial amounts or reduction in skin microflora in sebaceous glands. So she basically invalidated her own charts in Mylan's attempt to fill the void in its evidence with non-Section 282 references under this Court's order during the case concerning the non-Section 282 references. It can't even

attempt to succeed in that effort.

Dr. Feldman. After having watched over an hour of deposition testimony, all we know about Dr. Feldman now is what we knew before trial. That his alleged uses of Periostat were uncorroborated private uses, if they happened at all. They don't qualify as prior art.

Dr. Feldman's alleged use was not corroborated or public in 1999 or 2000, and it certainly wasn't corroborated by any witness at this trial. All we have is the overwhelming evidence from Dr. Feldman, himself or the lack of evidence showing that those alleged uses were unpublished, undisclosed, unappreciated, uncorroborated, and undeveloped.

Your Honor, there is good reason for the corroboration requirement under the law. It's so people can't come in years later with no supporting evidence and say they invented it and take patents away from the real inventors.

Here, Dr. Feldman doesn't say he invented anything. Why is that? The evidence from Dr. Feldman's testimony shows he didn't publicly disclose any use of Periostat. He did not disclose the idea to other dermatologists, nor did he write anything about the use or publish it, nor did he ever attempt to sell the idea or speak to CollaGenex or anyone else about it or attempt to patent it.

There was simply, and is simply, no evidence that Dr. Feldman ever even prescribed the Periostat to a single patient to treat rosacea. No one has ever seen this alleged prescription. We don't know if the use ever happened, and neither does Dr. Feldman, according to his testimony.

At trial, both of Mylan's experts, Drs. Gilchrest and Stafford had to admit that. They had to admit that they didn't know if the patient filled her prescription, if it existed at all, or if the patient took the drug, much less got better.

THE COURT: On these factual disputes, whether a patient took it, whether it is prescribed, who has the burden of proof, and what is the burden of proof?

MR. FLATTMANN: Well, the burden of proof is clear and convincing evidence, your Honor, and falls squarely on Mylan.

THE COURT: Even on these factual predicates for their clear and convincing argument, for their invalidity argument?

MR. FLATTMANN: Absolutely, your Honor. They have the burden of establishing there is any prior art at all. They haven't come forward with any evidence that there was any filling of the prescription or taking of the drug by the patient, so they haven't met their clear and convincing burden of proving invalidity because they can't even meet

their burden of proof of showing it was prior art.

I really think that is a very important point. No one in this entire case can say with any certainty at all that the patient took the drug, not even Dr. Feldman. There is no proof, just speculation. I'll get into that.

First, Dr. Gilchrest. She can't corroborate the story. She doesn't have any firsthand knowledge. All she has to go on is what Dr. Feldman says. Dr. Feldman says he doesn't know if the patient filled the prescription, so, of course, nor does Dr. Gilchrest. She admitted that on a couple of occasions.

Dr. Gilchrest also admitted that we can't simply speculate or assume that the patient took the drug because patient noncompliance has been a problem for thousands of years.

To make a separate point, your Honor, she admitted that she had not even taken account of the fact that as shown in Plaintiff's Trial Exhibit 470, Ashley's invention was conceived before Dr. Feldman's uncorroborated alleged use. That article references a telephone conference about the clinical trials for Periostat on February 17th, 2000 with the FDA. That's the very latest date on which this invention could have been conceived by Dr. Ashley, and that predates this alleged uncorroborated prior use.

Moreover, Dr. Gilchrest admitted that she is not

aware of anyone who prescribed a dose of less than 50 milligrams of doxycycline, which is an antibiotic dose for the treatment of rosacea prior to April 2001.

Now, given her expertise and her prominence in the field for many decades, if anyone would have known, she would have. You can bet, your Honor, that Mylan's attorneys scoured the world looking for this evidence. It doesn't exist.

Neither she, nor Dr. Webster ever heard of this supposed conference that Dr. Feldman referred to. Mylan has failed to prove anything about the conference. We don't have any evidence about it, no notes, no dates, no papers, no agenda.

Again, if all this happened, they would have heard about it. They would have known of it. It would have been published. It would have been publicly known. It wasn't.

Dr. Stafford, who was Mylan's expert on the IMS data, admitted during trial that it's not possible to directly link the patient who was allegedly prescribed Periostat with the patient who later filled the prescription. That's because IMS data simply does not address the important questions here. It doesn't say who the patients are, and it doesn't say what the drug was prescribed for. There was no dispute on that.

In the end, Dr. Stafford's testimony was

speculation. It was likely that the patient was the one that Feldman prescribed for. It was likely that she filled the prescription. Mylan adds a few more likelies to the equation: that she took it, that it worked, et cetera, but it has no evidence on any of these points, and likelies from experts and speculation from Mylan are not a substitute for proof of clear and convincing evidence, your Honor.

In summary, all Mylan could do is speculate about Feldman's alleged prior uses. In the end, this Feldman experiment amounts to nothing but a failure of proof.

I will now turn to the Chang patent, your Honor.

In the opening statements, we previewed the collection of art that Mylan was asserting against the Chang patent. First, your Honor will recall that Mylan had a large stack of 18 references. Right before trial, the pile shifted and reconfigured. Even after Dr. Rudnic's testimony, Mylan's pile changed again. In the end, we were left with four references. So it's been constantly morphing throughout the course of even the trial.

As we heard yesterday from Dr. Friend, Mylan's invalidity arguments now rest on these four references: the Ashley controlled-release references, it's the '854 application; the Ashley patents-in-suit here, I'll call them the rosacea references and the '932 application; an

amphetamine patent, which is the '819 patent; and a minocycline patent, which is the Sheth '304 patent. So I'll call these the four Friend references collectively.

Your Honor, none of those references came close to disclosing all the elements of the asserted claims or making them obvious.

Galderma presented an expert on the validity of the Chang patent who I will submit his credentials were pertinent and beyond dispute. Dr. Rudnic has been involved in the formulation development of over 80 commercial products, and they have combined sales of over $1 billion. He is the inventor of the patent that the Patent Office regards as the closest prior art to Chang. He is the inventor and codeveloper of the Shire Microtrol technology that Mylan asserted was the technological foundation for the Chang formulation. Dr. Rudnic explained how and why Mylan's prior art is irrelevant to the invention of Dr. Chang.

What did Mylan do in response? In response, Mylan presented two experts who denigrated the work of Dr. Chang as pedestrian formulation development, even though neither of them had, in their long careers, ever accomplished Dr. Chang's so-called pedestrian act of developing so much as a single drug formulation that ever made it to the market.

So perhaps it was fitting for Mylan to present two experts that were so bereft of successful formulation development experience. Both were asked to opine on two references, the Ashley references, that are somewhat analogously totally bereft of any formulations.

I think we foreshadowed in our opening and have now proven that Mylan would have the Court invalidate a formulation patent, Chang patent, on anticipation grounds, no less, based on stitching together random excerpts of two references that, even taken together, don't disclose a single example of any formulation. That is contrary to the black letter law that anticipation requires that a single prior art reference disclosed the limitations of the claim as they're arranged in the invention, your Honor.

Can we put up DDX-615, please?

Your Honor will recall that Mylan used an anticipation claim chart in Dr. Friend's testimony, DDX-615. This is ultimately no more than random pieces from a few documents that have been cut out and pasted together to render a meaning that bears no relation to the purpose or meaning of either original reference.

Now, even if such cutting and pasting were proper for a validity attack, Mylan still can't meet its heavy burden, clear and convincing evidence, of proving invalidity with the Ashley references. There is a glaring

hole in its proofs, your Honor. Namely, to borrow from Dr. Rudnic's analogy, which I think was instructive, if the Chang patent were instead a patent for a Big Mac, Mylan has taken from the recipe book a disclosure of a bun from one page, and all beef patties from another, an unrelated recipe page, a disclosure of lettuce and cheese from some other page, but at the end of the day, as both Mylan's counsel and its experts admitted, Mylan still missing the so-called secret sauce.

It's now undisputed that the key Chang claim limitation of 30 milligrams of IR and 10 milligrams of DR beads is completely absent from the Ashley references, as it's absent, according to Mylan's own expert, from Mylan's admittedly more distant '304 and '819 references.

And Dr. Friend's apparent surprise at the fact that one Adderall patent using Microtrol technology has been determined by the Patent Office to be patently distinct over another of the same breed, both patents being closer in their disclosures to one another than either is to Chang, took the air out of Dr. Friend's unwarranted denigration of Dr. Chang's truly inventive work as merely off-the-shelf technology.

No doubt appreciating the shortcomings in its validity attack, Mylan resorted to a somewhat unprecedented tactic here. It tried to shore up the hole in the prior

art, not with another prior art reference, your Honor, but with contemporaneous inspired modeling by Dr. Rubas. But it's clear that Dr. Rubas's modeling, whatever it was intended to convey, is not prior art, and it cannot credibly be taken as objective evidence of the knowledge of a person of skill in the art here.

Indeed, Dr. Rubas hedged both of his opinions by saying that they were things that a person of skill could have known -- could have known. But "could have" is not the test. The statute requires that it would have been obvious, and it requires both public disclosure and motivation.

Knowledge of one of ordinary skill in the art still requires credible proof, and that proof is usually supplied by contemporaneous literature cites, not by murky modeling techniques used by a litigation expert who was given Dr. Chang's invention and then was asked by Mylan to show why, working backwards, that which he already knew was not surprising.

That's not a proper validity attack. Even the best of inventions look elegantly simple and unsurprising when viewed in a false light, your Honor. From the ultimately improper advantage of hindsight, Dr. Rubas' modeling simply can't shore up a hole in Mylan's proofs here.

Now, the other art that Mylan relies on is directed to different active ingredients like amphetamines,

different pharmacokinetic parameters like increasing blood levels as opposed to maximum concentration, or different effects like antibacterial effects. Mylan argues that different individual elements were in the art, to be picked and chosen from here and there, but it never shows that anyone combined them, and it never shows that this combination would have been obvious at the time of the invention instead of in hindsight.

All Mylan is doing is cherry-picking various pieces of the claimed invention from dozens of sources and cobbling them together as if the Chang patent formulation were already known and in hand. We can see that with the Microtrol technology argument.

In its opening statement, Mylan's counsel argued that the Chang patent inventors merely used off-the-shelf technology to arrive at the Oracea formulation. But even Mylan's expert, Dr. Friend agreed that so-called off-the-shelf technology is appropriate for formulating all drugs. He agreed with that.

There were no guarantees that Shire could have developed it either. We saw, in Dr. Ashley's deposition testimony yesterday, that before CollaGenex even approached Shire to try to make a once-a-day formulation of doxycycline, Faulding failed three times to do this. Just because something can be taken off the shelf doesn't mean it will

work. We saw that with Faulding's failures.

Mylan's story about the invention of the Chang claims makes no sense. On one hand, it urges that Chang was just using Shire's Microtrol technology. On the other hand, it says, no, Ashley actually invented all of this. They can't have it both ways, and their arguments undercut each other. The evidence shows that neither was the case.

First, Robert Ashley testified that he didn't even know how to develop the Chang patent formulations. The inventors are presumed to be correct. Mylan has the burden of proving, by clear and convincing evidence, that the invention was derived or that it's wrong, but all Mylan showed was that CollaGenex had a goal and didn't know how to accomplish it. That's not inventorship.

As this Court previously found, ironically, in Purdue Pharma v Faulding, the very company that failed to formulate a once-a-day doxycycline: The test for conception is whether the inventor had an idea that was definite and permanent enough that one skilled in the art could understand the invention. An idea is definite and permanent when the inventor has a specific settled idea, a particular solution to the problem at hand, not just a general goal or research plan he hopes to pursue here.

A side-by-side comparison demonstrates who the real inventors of the formulations claimed in the Chang

patent is.

According to Robert Ashley, the objective of his Ashley CR application was to define a pharmacokinetic profile which avoided the spikes of concentration and had no diminutions of concentration, but that he had no meaningful idea of what composition might achieve that objective. He didn't know how he was going to get there.

But as Dr. Chang testified, CollaGenex and Mr. Ashley couldn't develop a product to achieve this goal. The profile itself that was sought by Ashley was meaningless, to use Dr. Chang's words. It was Chang and his team that developed a product to achieve the goal to, as Dr. Chang put it, to put some meaning to the value.

Now, inventors, as I said, are presumed to be correct. Mylan has the burden of proving that inventorship is wrong by clear and convincing evidence.

What did it show? That CollaGenex had a goal and didn't know how to accomplish it. That Shire accomplished it, and all CollaGenex did was "okay" Shire's work. Again, a research goal is not conception of the invention.

Mylan has put forth no evidence to contradict Mr. Ashley's own statements that he didn't invent this. None of it matters anyway. Absent deceptive intent, the Court can fix inventorship if it feels as though it's proper

under 35 U.S.C., Section 256. Mylan hasn't attempted to show any deceptive intent.

Now, returning to the four Friend references, all of which we learned were brought to Dr. Friend's attention by Mylan's counsel. Dr. Friend testified yesterday that he believed that the Ashley references were the closest prior art. But even as the closest prior art, Dr. Friend agreed that the Ashley controlled-release patents did not even disclose any formulation that was tested or modeled or any formulation of immediate-release and delayed-release beads at all.

Even as the closest prior art, Dr. Friend agrees that a comparison of the hypothetical plasma profile of the Ashley CR references, on the left here, figure 1, and the Chang formulation, illustrated here on the right, figure 5, were different. That is Mylan's closest prior art.

In fact, Dr. Friend agreed that the Ashley patent applications do not teach the Chang patents. He admitted that if you were trying to follow the disclosures of Ashley with respect to the only release profile disclosed, you would not be successful if you tried a 30-milligram IR to 10-milligram DR combination. That's definitive, your Honor.

In his direct examination, Dr. Friend also relied on two combinations of art in support of his obviousness opinion. One combination included the minocycline, or Sheth

'304 patent, and Dr. Friend confirmed that minocycline and doxycycline have different physical and chemical properties, and he confirmed that the point of the '304 patent was to keep the blood plasma levels in a concentration range where they would act as an antibiotic.

Dr. Friend testified that he is not aware of any disclosure in the '304 patent of anything other than antibiotic doses of minocycline. That is at transcript, 846 to 847.

In view of all these differences, even Dr. Friend testified that the '304 patent is not as close to the Chang inventions of the Ashley patent applications which the Chang patent issued over anyway.

Now, also according to Dr. Friend, there is no particular reason why a person of ordinary skill in the art would look to the Burnside '819 amphetamine patent when attempting to formulate a once-a-day doxycycline. Dr. Friend testified that the use of amphetamines is very far indeed from the Chang patent.

Notably, Dr. Friend testified yesterday that he could have chosen dozens of other examples, but Dr. Friend didn't chose any. Mylan's counsel gave it to him.

Dr. Rudnic, a named inventor on this Burnside '819 amphetamine patent, agreed. He testified that he didn't think the patent had anything to do with the Chang

patent. He is the named inventor.

Now, we also learned yesterday from Dr. Friend that a person of skill in the art, applying the teachings of the Burnside '819 amphetamine patent, would violate the important requirement that patient plasma concentrations don't exceed 1.0 micrograms per mil threshold. So they wouldn't meet the claim, according to Dr. Friend.

In the end, Dr. Friend doesn't dispute that none of the references he relies on expressly disclose a once-daily dose of doxycycline, a formulation with a 30-milligram IR portion and a 10-milligram DR portion, formulations that result in steady state blood levels of .1 to 1.0 micrograms per mil or formulations that result in steady state blood levels of between .3 and .8 micrograms per mil.

So both sides' experts are in agreement at the end of the day concerning certain critical facts about the alleged prior art references. They simply don't meet the important limitations of the Chang patent. So there can't be any anticipation or any way to combine these references to arrive at the Chang invention. They can't overcome that failure of proof, your Honor.

Mylan's pharmacokinetics expert, Dr. Rubas testified that he didn't even consider whether a person of ordinary skill in the art in 2003 would have been motivated

to formulate an IR/DR once-daily product. Curiously, when asked the question on cross, Dr. Rubas testified that he didn't even understand why that was relevant. Well, it is. This is because Dr. Rubas admits essentially that his analysis was based on hindsight, which is prohibited by the Federal Circuit precedent and the KSR decision.

Dr. Friend, himself testified that he relied on Dr. Rubas's analysis, which, again, we know was tainted with hindsight. So Dr. Rubas's improper hindsight analysis taints Dr. Friend's opinions as well.

In sum, your Honor, Mylan's invalidity proofs on Chang fall far short.

I'll go to the Amin patent, your Honor. I'll turn to our third pile of art. Mylan cited over eight references against Amin but it couldn't identify any of them as invalidating art.

These are the eight references that Mylan relied on. Six of the references are from Golub and Greenwald, two of the inventors of the Amin patents, and the seventh one is from the drug sponsor.

By Mylan's expert, Dr. Robbins' admissions, though, none of these eight references expressly or inherently disclose nitric oxide or inducible nitric oxide synthase, and not one of them, according to Dr. Robbins, discloses, expressly or inherently, the use of doxycycline

to inhibit nitric oxide or inducible nitric oxide synthase in mammals.

I can show you where that appears in his testimony, over and over, for each of these eight references.

Here at Robbins trial transcript, 735 to 736. Again, on page 736. Again, on page 730. Again, with regard to Schroeder on page 731, 737, 733, 732, and 731. For each of the eight references, he made these critical admissions.

So we kept our promise in the opening that we would show that they, by their own admission, admit that there is no express or inherent disclosure of nitric oxide or iNOS in any of the references they rely on.

Now, during trial, Mylan argued that the Amin patents are inherently anticipated. But Mylan, first of all, can't overcome the Robbins admissions that there is no inherent disclosure; and it can't meet its heavy burden of clear and convincing evidence that the prior art is necessarily practiced anyway.

Mylan's own expert, Dr. Robbins can't say whether doxycycline decreases NO or iNOS in two medical conditions, periodontitis and rheumatoid arthritis, which were the two medical conditions disclosed in the prior art references that he relied on. He admitted with regard to both of those conditions that he couldn't answer as to whether doxycycline decreased iNOS expression or NO

production. That's at page 730 and 734 of the transcript.

He further reiterated his position -- I think this is perhaps the most important piece of evidence -- his position that the Amin patents were the first to disclose that tetracyclines inhibit iNOS expression and NO production. The first means novel.

As you can see, your Honor, none of their prior art references even mention NO or iNOS. Mylan's own expert has admitted novelty. How can Mylan prevail on its invalidity defense.

Your Honor, we have demonstrated that the objective indicia of nonobviousness also strongly point in the same direction here, to validity. In fact, because these common sense objective indicia of nonobviousness were so clear on the their face and were established through Mylan's own experts, Galderma didn't need to rely on separate rebuttal testimony to prove secondary considerations. The admissions from Mylan's experts, buttressed by the testimony of Galderma's own experts, suffice.

First, long felt need.

The evidence demonstrates that there was a need for a treatment for rosacea that did not cause side effects, gastrointestinal upset, phototoxicity, and other side effects which were viewed by dermatologists as, I think Dr. Webster said, a big pain in the neck in the 80s and 90s.

The evidence showed a need for the treatment of rosacea that did not cause antibiotic resistance. Dr. Gilchrest testified to that and also testified that it helped to address a very serious public health concern.

The evidence showed a need for a once-daily dosage form to increase patient compliance. As Dr. Gilchrest testified, she prescribes once-daily dosage forms because it's easier for the patient and improves patient compliance.

Similarly, Dr. Friend testified that reducing the number of doses required over a period of time improves both patient compliance and therapeutic outcome.

Even today, Oracea remains the only orally available approved treatment for rosacea.

Failure of others.

Dr. Rudnic told us the whole story as to why the first tries by Faulding, a very fine formulation company, failed to make a once-a-day formulation of this drug.

Robert Ashley confirmed that failure in his testimony which we heard yesterday.

Unexpected results.

The results obtained by these inventions were entirely unexpected. It was unexpected that subantibiotic amounts would work to treat rosacea. Dr. Webster testified to that.

Rosacea was thought by many to be bacterial in

origin. Others didn't know what caused it. It was treated in any event, regardless of what one thought the etiology of the disease was, it was treated by antibiotic dosages.

As Dr. Webster testified, the conventional wisdom was to hit these bugs with high doses of antibiotics. It was completely counterintuitive that small amounts of the drug work, that subantibiotic amounts would work.

It was unexpected that once-daily dosing would work for subantibiotic amounts of doxycycline. As Dr. Rudnic testified, he would not have expected that it would have succeeded given the absorption window, and he would not have expected that any particular IR/DR combination of the claims would have succeeded.

It was not expected that these levels would work in any sort of once-a-day formulation. It was not expected that the drug could exhibit substantially no side effects, as shown in everyday practice with the drug, confirmed by the testimony of Dr. Webster.

It was not expected that the drug would exhibit no phototoxicity. As Dr. Webster testified, this has made it a lot easier to treat patients year round, particularly in the summer.

It was not expected that the drug would not cause the same gastric upset in patients and the other side effects that had been observed in the past.

So there is abundant testimony from experts on both sides on the common sense factors to support nonobviousness of the patents here.

Notably, Mylan hasn't even contested commercial success in this case. They really can't. It hasn't contested it at trial. Galderma's experts have testified that Oracea is covered by each of the patents-in-suit here, and Mylan did not dispute that at trial.

Mylan's own IMS data, which is DTX-2243, regarding Oracea's annual sales by itself is sufficient to demonstrates Oracea's commercial success. That IMS data showed that annual Oracea sales doubled between 2007 and 2008 and again between 2008 and 2009, and Mylan itself projected that Oracea's sales growth would just keep on increasing, and it has. To date, sales since launch, just a little over four years ago, totalled over a half billion dollars.

Now, Mylan's own expert, Dr. Gilchrest admitted that Oracea is a commercial success, and that it sells well, in her words -- my words that she agreed with.

Dr. Webster attributed the commercial success to the need that Oracea fills because of its patented features.

Mylan has failed to provide any evidence at trial that Oracea sales are due to anything but the patented benefits of Oracea. Mylan's expert, Dr. Gilchrest

testified: "... all physicians endeavor to make informed decisions based on information and not on advertising materials but based on objective evidence, and I do that also."

She also testified that she had no information that led her to believe that Galderma or CollaGenex have been anything but truthful in their marketing of Oracea, in their marketing about Oracea and its benefits.

Ultimately, why did Mylan's expert, Dr. Gilchrest say that Mylan was pursuing a generic copy when I asked her that question?

Because they believe it will be a successful product. They want to hitch their wagon to Galderma's successful product, Oracea.

So there is abundant unrefuted evidence of commercial success and nexus to the claimed invention for these patents.

In conclusion, your Honor, Mylan's product infringes each of the assert claims of the patents in suit. Mylan's invalidity defenses fell short of meeting their clear and convincing burden as to all three patents. They were forced to cobble together dozens of references in Byzantine combinations just to make hindsight obviousness arguments, but none disclosed the inventions. Despite these piles of art that they have relied on, no one developed a

drug like this for decades. The alleged Feldman prior uses were not public uses at all. They were uncorroborated then, they were uncorroborated today, and they weren't public. Dr. Feldman wasn't here to shed any light on it, and no other witnesses were called that could do so from firsthand knowledge. The common sense factors further confirm the validity of all five patents.

Your Honor, in view of the evidence that we have adduced at trial, we submit judgment should be entered in favor of Galderma. Thank you.

THE COURT: You said several times in your presentation that it's undisputed that Oracea practices or is an embodiment of the five patents in suit. Other than what you showed us that your experts testified to that fact and you claim it's not contested, what else do you have or is that all that you have to base your conclusion, your contention that that fact is undisputed at this time?

MR. FLATTMANN: I rely on the testimony of our three technical experts who testified that they compared the Oracea label and Oracea to the asserted claims of the patents in suit and concluded that Oracea was covered by each of those asserted claims, and the fact that during the course of the trial, none of Mylan's experts disputed that conclusion.

THE COURT: Okay. Thank you very much.

MR. FLATTMANN: May I answer any other questions, your Honor.

THE COURT: If I have more, I'll get back to you.

MR. FLATTMANN: Certainly.

THE COURT: Thank you.

MR. FLATTMANN: Thank you.

THE COURT: I'll hear now from Mylan.

MR. STEUER: Your Honor, David Steuer for Mylan. I'd like to start off by --

(Remote control handed to Mr. Steuer.)

MR. STEUER: They're going to see if I can handle the clicking here.

I want to thank the Court and its staff for its courtesy. I know the long days for the lawyers are long days for the Court as well, and the Court has been very gracious to me and our team and our staff.

Also, I think opposing counsel has been aggressive but courteous. I do want to thank them, I should have at the pretrial, but they moved that for my benefit to make a long planned commitment.

Your Honor, I think the parties have presented a good record for the Court to assist the Court in deciding this very important case.

The Hatch-Waxman Act is an important feature of

this country's policy with respect to pharmaceuticals. President Reagan said, when he signed into the law the statute in 1984, that, "The Hatch-Waxman Act will provide regulatory relief, increase competition, economy in government and best of all, the American people will save money, and yet receive the best medicine that pharmaceutical science can provide."

So there is nothing wrong about a generic hoping to compete and lower the cost. I think to the extent that that is something that should be considered, it should be considered by legislatures.

(Binders passed forward.)

The question for this Court is whether the five patents are valid; and, if so, whether Mylan will infringe them by selling its ANDA product.

I'm going to also review the evidence in the way I previewed the evidence because I, too, believe in pedestrian formulations so I'm not changing anything.

Let's start with the Ashley patents. Let's talk about invalidity.

Your Honor, you saw Dr. Feldman. You had a chance to see him speak. You had a chance to consider his demeanor and his testimony. He was, we believe, entirely credible, entirely forthright in his testimony, and he testified to two separate instances of practicing the Ashley

patents before their priority date.

First, his own use. Dr. Feldman testified clearly and convincingly that he learned at a dermatology conference late in the 1990s that he could use Periostat 40 milligrams doxycycline, the especially preferred embodiment of the Ashley patents, to treat his own rosacea. He testified he used it for many months starting in late 1999. He found that it reduced the papules and pustules on his own face, on his chin.

He practiced the method of the Ashley patents. This is a public use. Galderma has produced nothing to contradict Dr. Feldman. Dr. Feldman said that after he used the Periostat he was prescribed, he requested professional courtesy samples, and that CollaGenex sent him samples. If that Galderma could have disproved that at trial, they certainly would not have hesitated to do so.

Dr. Feldman testified about the second instance of practicing the Ashley patents prior to their priority date when he prescribed Periostat in February 2000 for a patient that suffered from rosacea. Dr. Feldman testified that the reason he wrote the prescription for the patient is that he, himself had a successful use of Periostat to treat his own rosacea.

We have seen the patient record from the patient's files, from Dr. Feldman's files, and we have also seen the IMS

data demonstrating that a patient of Dr. Feldman filled a prescription for Periostat in March 2000. Of course, the appointment with the patient of Dr. Feldman was on February 19th, 2000.

Dr. Stafford testified that the IMS data leads him to conclude that the patient in Dr. Feldman's patient record was likely -- and he can't know 100 percent but was likely the same patient who filled the prescription in March 2000. That would make sense because Dr. Feldman testified it was the only prescription he ever wrote.

The Court asked Mr. Flattmann a question during his remarks about what the burden of proof is with respect to evidentiary issues relating to an invalidity claim. I think the Supreme Court recently gave guidance on that issue in the Microsoft v i4i case. I think that was the exact point of Justice Breyer's concurrence, so I think that might be a good place. Justice Breyer pointed out although the overall burden is clear and convincing proof, that with respect to specific evidentiary facts, the normal preponderance of evidence standard may well control.

I think that might be a good place to start on the answer. We'll certainly brief that issue.

Now, Galderma claims there is no evidence the patient ever filled the prescription, but Dr. Webster has testified that it is to be expected that a patient will take

a prescribed drug.

When we asked him, "Question: And the assumption you make is that they will in fact take it. Correct?"

He answered: "Yes."

Indeed, one of the central assumptions of Galderma's infringement theory is that patients prescribed Mylan's ANDA product will take it, as Dr. Webster agreed.

Dr. Feldman's conclusion that his patient had taken the Periostat is consistent with Dr. Webster's testimony.

Now, Galderma appears to argue that because Dr. Feldman did not count lesions or measure microflora, he was not practicing the invention. However, Dr. Webster's comments were not consistent with Galderma's theory.

Dr. Webster was asked whether, in order for Mylan to infringe, that Galderma would need to count lesions or take skin swabs? His opinion was that was not required.

I asked him: "So your opinion today is that we know that a patient that takes this preparation will have a reduction in lesions and no reduction in skin microflora?"

Dr. Webster said: "That is my opinion."

But even if Galderma were correct with respect to whether lesions need to be counted to establish a use, it turns out that Dr. Feldman testified explicitly to having a

reduction in pimples and pustules on his face. In fact, I think he wrote for his chin at the time, and he said the skin looked better.

Both Dr. Feldman's own use and his prescribing of Periostat to his patient are public uses. A public use does not require a journal article. It doesn't require a patent application. Especially when it's a third party who is not attempting, as Mr. Flattmann discussed, to take credit for an invention. Dr. Feldman doesn't claim he invented the Ashley patents.

The only element of either of Dr. Feldman's uses that was private was the name of the patient, which is not related to any limitation of the Ashley patents.

The use was obvious and in line with a world of prior art described by Dr. Gilchrest. Here are some examples:

In 1962, Murphy administered 125 milligrams of oxytetracycline for 6 to 12 months to treat acne; and the antibiotic dose for oxytetracycline was 1,000 milligrams.

Sneddon in 1966 of administered 100 milligrams of a controlling dose of tetracycline to treat rosacea. This was 45 years ago.

Marmion and Wereide in 1969 treated patients with low doses of tetracyclines to treat rosacea.

Cotterill in 1971 administered 250 milligrams of

oxytetracycline for three months to treat patients for their skin problems. And,

Bartholomew administered 500 milligrams of oxytetracycline to treat rosacea.

One point about Murphy that Dr. Gilchrest pointed out is that the dose of oxytetracycline that Murphy used to treat his patients was so low, it actually fell below the bottom bounds of the Ashley patent. That is why it did not anticipate claim 23 of the Ashley patent.

There was a point made that these are all old. Dr. Gilchrest explained to us, well, they're old because there is no dispute about this. It was just well known that papular rosacea is an inflammatory malady and that lower doses of tetracyclines are effective in giving systemic relief.

Here are some of the key quotes from these older documents:

Marmion. There is a high degree of correlation of the changes occurring -- I'm sorry. I'm ahead of myself.

This is about Pflugfelder. Pflugfelder was not considered to be invalidating by the examiner. Of course, Mylan did not have a chance to discuss their views of Pflugfelder with the examiner, which is why we're trying this. Dr. Gilchrest explained why the invention was made obvious by Pflugfelder.

Now, the distinction that has been drawn is that meibomian gland disease or ocular rosacea is a distinct malady from facial rosacea. However, that does not stand up to the prior art that was not shown to the examiner. The examiner did not see Marmion or Bartholomew, so the examiner was not aware of the high degree of correlation in the eye with the skin decease and treatment that is effective for the skin disorder, telling the art that it may therefore be a value for treatment in the ocular condition.

Bartholomew said, systemic oxytetracycline is thus a useful and safe treatment for ocular rosacea as well as rosacea of the face. So it was actually long known in the art that if you treat one, you treat the other.

Dr. Webster, who was, of course, Galderma's witness on the Ashley patents, did not disagree that rosacea and ocular rosacea are often seen in the same patient and are related.

Now, the only witness on the Ashley patents for Galderma was Dr. Webster. Dr. Webster is a distinguished and accomplished physician/scientist, but he is not an independent expert. He has been a paid Galderma and CollaGenex consultant for many years. He admitted on cross that he actually advised CollaGenex on developing the very product that is before the Court.

He gave an answer that I don't think I have

heard before. When I discussed prior writings with the witness, he said that he had the publisher change his writing because he had, of course, stated on direct that this was an amazing invention -- that was the word he used, "amazing" -- to believe that a low dose of doxycycline could be effective.

I challenged him on that. I said: Well, you actually wrote that 50 milligrams a day may be an acceptable dose, which is a little higher than the invention but not much and certainly not a dose you would treat an infection. He denied that. I showed him an exhibit, and he said that the publisher probably put that in. These things happen between the manuscript and the galleys.

This was really not Dr. Webster's best moment because he actually said that in three different publications that are all in evidence. In fact, he wasn't amazed at all that a low dose of doxycycline could be effective because he was already recommending low doses of doxycycline to the profession and for treatment of patients. It's not surprising because, as Dr. Gilchrest explained, rosacea hasn't been considered an infectious disease for decades.

The Ashley patents, what we have here are some quotes from the art that shows the state of knowledge, what was obvious to someone of skill in the art about the nature of acne, about the nature of rosacea. That they don't

change bacteria flora in the sebaceous gland, and that it's an antiinflammatory process. This is not news. It was known well before Ashley. It was known decades before Ashley.

1975, which is 36 years ago, Plewig stated, "The fact is that it is not necessary to kill C. acnes; good therapeutic effects can be obtained with non-inhibitory levels." Non-inhibitory, non-antibiotic.

These studies have confirmed Plewig's observation confirming the antiinflammatory activity and lack of inhibition of bacterial growth in sebaceous glands with low dose tetracycline compound treatment.

Let's talk about infringement.

In infringement, each and every claim has a requirement that there be an amount of doxycycline that does not significantly inhibit the growth of microorganisms. This is a scientific issue. It implicates all microorganisms. The patent isn't limited to a particular microorganism or a particular location within the human body, as Dr. Webster admits.

In the prosecution history, Mr. Ashley told us that, "A skilled artisan would have no difficulty understanding the phrase, 'substantially no antibiotic activity.' A few of the more sensitive bacterial cells may be inhibited by a subantibiotic dose of a tetracycline."

Now, doxycycline is one of the most potent of

antibiotics. It shuts down the protein metabolisms of microorganisms. In other words, it inhibits their growth. And doxycycline is broad spectrum, which means it inhibits the growth of many microorganisms. When administered orally, doxycycline circulates into every part of our body or, as Dr. Chambers told us, wherever blood goes, it takes doxycycline with it.

Dr. Chambers told us that our bodies contain more bacterial cells than human cells. There are an estimated 100 billion bacterial cells, to be exact. In fact, by a factor of 10, which was a creepy fact I learned during the prosecution of this case.

We know that more than a few of the more sensitive bacterial cells, which is the words of the inventors, are inhibited by a 40-milligram daily dose of oxycycline, significantly more. We know that because they have tested it.

Now, you heard from Dr. Chambers on this. I don't think anybody has questioned his credentials and knowledge when it comes to doxycycline, what doxycycline does to the 1 x 10 to the 14th microorganisms in our bodies.

Dr. Webster, who is a dermatologist by training, does not actually present to the Court the same background and expertise that Dr. Chambers does. Dr. Chambers reviewed five in vivo studies regarding 40 milligrams of a daily

companies of doxycycline, three of which Dr. Webster did not address. Let's look at these studies briefly.

This is the Haffajee study from 2008. It was funded by the NIH, and as stated by Dr. Chambers, figure 3 in the Haffajee study provides irrefutable evidence that Mylan's ANDA product will significantly inhibit the growth of microorganisms. Though the Court's claim construction doesn't require that significance be significance to a statistical measure, this is, in fact, a statistically significant inhibition of growth.

The spike does not occur unless there is an inhibitory effect. Dr. Chamber's opinion regarding Haffajee's study is unrebutted. Dr. Webster didn't testify about it.

Mr. Flattmann said that there is language in the study that points against that. What that language pointed to was they couldn't determine which particular strain were the doxycycline resistance strains that grew.

Dr. Chambers said, in his sparring with Mr. Flattmann, Mr. Flattmann was perverting the study. Although I'm not going to be quite as colorful as maybe Dr. Chambers can be at times, I do believe that that is true. That if you read the study, the part that Mr. Flattmann points to is just the part where they are saying they can't break apart that group of resistant organisms to tell you

which ones exactly are the ones that took advantage of this antibacterial effect of doxycycline.

We also talked about the Thomas study. Here, Dr. Chambers told us that Table 2A provides irrefutable evidence that Mylan's ANDA product will significantly inhibit the growth of microorganisms. Again, this is a spike that does not occur unless there is significant inhibition.

Dr. Chambers' opinion regarding the Thomas study is unrebutted. Dr. Webster didn't address it.

This is the Walker 2000 study, and Dr. Chambers testified that Tables 1 to 3 all show Mylan's ANDA product will significantly inhibit the growth of microorganisms. So the graph of data from Table 1 from Walker 2000, data shows significant inhibition of growth. Dr. Chambers' opinion regarding the Walker 2000 study again is unrebutted.

So what do Haffajee, Thomas, and Walker 2000 study have in common other than the fact that Dr. Webster didn't talk about them? All three studied the oral cavity, and all three oral cavity studies proved Mylan's ANDA product will significantly inhibit the growth of microorganisms. Dr. Webster did not identify a single study of the oral cavity that shows anything to the contrary.

So what are the studies that Dr. Webster did rely on? He relied on the Skidmore study. Well, we showed

you that Dr. Skidmore doesn't know too much about the Skidmore study. But whoever wrote it, that person didn't provide data that allows a scientist to rule out the possibility of a false negative.

Mr. Flattmann criticized Haffajee because it didn't have a larger dose of doxycycline. The positive controls rules out a false negative. It's not necessary to rule out a positive. Just like a placebo is necessary to rule out a false positive. Positive controls rule out the false negative.

But in any event, Skidmore did not have a positive control. It would have been interesting to see what it would have look like if you had a 50-milligram dose of doxycycline, which Galderma contends is antibiotic, against the 40-milligram dose. Then we could see if there really is an antibiotic threshold there.

Dr. Chambers explained that the data cannot be interpreted. Therefore, no significant inhibition of growth occurred. One of the subjects in the doxycycline group suffered a case of vaginitis because of, as the author said, the doxycycline. That, too, is a significant inhibition of growth which caused the vaginitis. And Dr. Webster did not opine otherwise.

With respect to the Walker 2005 study, once again there was no positive control. Once again, the data

cannot be interpreted to include the possibility of a false negative.

Dr. Chambers also found data that was suggestive of significant inhibition of growth, but he said he really can't be definite on that because he couldn't get any of the underlying data.

Your Honor, the Court heard a lot of discussion about the label. I believe that in this trial, the Court has much more evidence about the label than it had earlier when it ruled on it. In particular, now the Court has the label history, which is, I believe, quite revealing.

Now, Dr. Webster interprets the label to mean that Mylan's ANDA product will not significantly inhibit the growth of microorganisms, but his interpretation is actually not the language of the label.

Where he says no effect -- that the label says it has no effect, what it actually says is that the microbiological studies demonstrated no detectable long term effects. We don't dispute those studies that are referenced did demonstrate no detectable long term effects. That is different from no effects.

It says that this dose should not be used to treat bacterial disease. Well, of course, that is true. There is no studies showing, for example, 40 milligrams of doxycycline would knock out pneumonias or other infections.

That's why it says doxycycline should not be used for those purposes. It's a direction to the physician on how to use this drug. As all the doctors before the Court testified, this is not a dose that you would use to cure disease.

I think Dr. Webster used the phrase such as, I think you want to poke or punch the disease. This is not a punching dose.

What Dr. Webster does is he basically reads words that aren't in the dose -- aren't in the label. He says that the package insert wording says clearly that for the long term administration, there was no effect on the bacterial flora of the oral cavity, skin, intestinal tract and vagina. That is actually not what it says.

Again, he says that what the label says is that there was no effect. That is just simply not what it says. I think we saw some of that in Dr. -- in Mr. Flattmann's discussion, which is what he described as being the label is actually not what the label is.

Now, everyone agrees, even Dr. Webster, that a therapeutic amount, in an amount that will significantly inhibit growth are two very different amounts. They cannot, and should not, be confused. So he said one dosage that reaches antimicrobial effect, while inadequate to treat an infection, could still alter the normal flora and have changes induced therein. We agree with that. That is not

how we would treat infection, with such a lose dose.

We do think that perhaps the most telling evidence regarding how the Court should interpret the label comes from the FDA. The FDA insisted that certain changes be made to the label before approving it. What the FDA demanded is that the language that perhaps did directly read on the patent be removed, be deleted. The FDA expressly refused to allow Galderma to claim that Oracea does not inhibit microorganisms. They took that out.

The FDA insisted on inserting the words "detectable long-term" -- detectable long-term -- between the words "no" and "effect." Dr. Webster acts as if those new words never appeared in the label, but apparently the FDA thought they were important enough that they should be in there.

Dr. Flattmann talked about how we don't know what "well below" or what the FDA thought "well below" means. While I thought the argument would be stronger if the FDA only struck the word "well" and allowed Galderma, or actually CollaGenex, to continue to say that the amounts are "below" the level required to inhibit microorganisms. They took out the entire concept.

So the FDA was certainly not convinced. Although they weren't a judge in a patent case, they certainly weren't convinced that the limitation had been met by Galderma.

THE COURT: In passing, you referred to Mr. Flattmann as Dr. Flattmann. He appreciates the promotion, I'm sure.

MR. FLATTMANN: I appreciate that.

MR. STEUER: I think he is a doctor of law, your Honor.

THE COURT: Let me ask you, what about the deletion of the word "antibiotics" by the FDA at the same time?

MR. STEUER: Well, I think what is interesting here, and I don't have a slide on it, but if you look at the entire label on it, for the Court, Section 5.1, in fact, Oracea is described as an antibiotic. I don't know the history behind that, i wasn't a participant in it, but the label actually does repeatedly refers to the product as an antibiotic.

THE COURT: But there is nothing in the record as to what FDA was actually thinking and why they insisted on these changes; isn't that correct?

MR. STEUER: Well, I wouldn't say there is nothing in the record. We have the FDA memorandum which gives their opinion on these reports. I read some language from the FDA memorandum where they said -- and this is not too far distant in time actually from the approval of this label -- where the FDA said we don't think you can extrapolate from the

evidence you give us to the conclusion that there is no effect on microorganisms.

So to the extent we have a little window into the FDA's thinking, I think the memorandum is helpful on that. We don't dispute the accuracy of the label. We think the label is fine. We think it's accurate.

Now, once again, I think we have to fall back on the burden of proof here. It was incumbent upon Galderma to show that there is no significant inhibition of microorganisms in the body, in a human.

We are certainly aware from the Court's previous ruling that the Court does not believe that in vitro evidence will suffice to show that it isn't prudent, but the in vivo evidence actually weighs strongly against the argument for infringement, and the data is what the data is.

The claim limitation is a scientific inquiry and the science is, yes, there will be significant inhibition.

Dr. Chambers, of course, also pointed out that, as I just discussed, preempting my order of slides, that their label does not speak to the specific issue of the patent.

THE COURT: Before you move on.

MR. STEUER: Yes.

THE COURT: Answer for me whether, in fact, it is contested that Oracea embodies the patent in suit, in

particular, the Ashley patents in what you have just gone over.

MR. STEUER: No, we do not believe -- I believe we have shown, based on Dr. Chambers' testimony, we do not believe it practices the Ashley patents because we do not believe that it does not significantly inhibit microorganisms in the body.

THE COURT: What about the suggestion that you effectively conceded that by not explicitly challenging it during the trial?

MR. STEUER: Well, I do think that we challenged it during the trial. Perhaps I didn't -- I can't cite a specific phrase, but all our evidence was looking at the specific preferred embodiment which Dr. Chambers pointed out. The preferred embodiment is the 40 milligrams of Periostat, 20 BID, which is the Haffajee study. We pointed out that was the preferred embodiment. It caused the growth of microorganisms. The resistant doxycycline microorganisms rose.

So I actually thought that we were trying to make that point that the preferred embodiment does not in fact meet the limitation of the patents. I do think that I would have to respectfully disagree with that assertion it wasn't presented.

Well, the Amin patents are a different breed

because they don't mention rosacea. They're about reducing these chemicals, nitric oxide and nitric oxide synthase. I'm not going to talk a lot about the Amin patents. I think the evidence and the arguments are pretty clear.

It's kind of an interesting patent because the invalidity expert was dropped in the middle of trial. As I want to discuss, the noninfringement here and the invalidity are, I think, are quite strong on it.

Noninfringement, their basis of infringement is the syllogism. They have no direct evidence of inhibition of this chemical.

Dr. Grisham said he thinks there is overwhelming evidence in the literature that this is a pathogenetic mechanism, referring to rosacea, involved in the formation of pustules and papules.

Well, nobody agrees with him. Dr. Robbins said there is no evidence that nitric oxide is involved in the pathogenesis of rosacea.

Dr. Webster said we still don't know convincingly what the cause of rosacea is. And,

Mr. Ashley said I don't think that causality has ever been proven, one way or the other.

What do the documents say? What do the studies say?

Well, the study was actually, at one point,

relied on by Mr. Grisham. Dr. Grisham indirectly said: Based on the results of the study, we conclude that the inflammatory species nitric oxide has no role in the inflammatory mechanism of acne rosacea.

What we want to show in the second slide is the difference between what Oracea proposed and what was approved. They proposed a label that stated that Oracea suppresses various processes, including the processes in the Amin patent, nitric oxide, iNOS, but the label says the mechanism of action of Oracea in the treatment of inflammatory lesions of rosacea is unknown.

Well, this actually does speak directly to the patent. Like in the Bayer case, I think that the patentee should be bound by its label right here.

Dr. Grisham, in fact -- just to point out that the label is dispositive on this, Dr. Grisham says that he disagrees with the statement in the label. So that is not very helpful to Galderma on this.

But the question is, does Mylan product inhibit iNOS or nitric oxide? So we asked him were you aware of any studies, Dr. Grisham? And he said he wasn't.

But this is what the patent shows. This is a test tube. It's from the patent, trying to show what happens in the test tube when you try to inhibit iNOS and reduce nitric oxide, or I might have that backwards. But

when you are dealing with these chemicals in the test tube, see, nothing happens until there is actually quite a heavy blood concentration or a heavy concentration in the test tube.

Now, I know that on the Ashley patent, there is a lot of discussion about how, just because it inhibits in the test tube, it is much tougher to inhibit in terms of antibiotics in the body, which Dr. Chambers disagrees with.

Well, here, there is no inhibition at this dose level in the test tube, and there is no evidence at all of inhibition in the body, so there is really just a complete absence of proof here.

Let's talk about the invalidity of the patent.

What we're relying on here is inherent anticipation. Of course, the law on this is that, "A prior art reference may anticipate without disclosing a feature of the claimed invention if that missing characteristic is necessarily present, or inherent, in the single anticipating reference."

This really describes the Amin patents to a tee because what the Amin patents do, they recognize the property. It talks about the tetracyclines, that they have this inhibitory quality.

Here are the two experts to speak on invalidity, Dr. Robbins and Dr. Oates.

As Dr. Robbins said, the prior art inherently anticipates the Amin patents.

Dr. Oates didn't show up. I don't know why. I guess Galderma felt they didn't need him.

Dr. Robbins also spoke about enablement. He said that the patent does not enable the practice of the art, particularly with respect to the low dose dosages. And,

Dr. Oates didn't speak to that.

Dr. Robbins was cross-examined on it, if I recall correctly.

Finally, your Honor, let me, if I may, turn to the Chang patent.

Again, I do think it's worth noting which witnesses that Galderma chose to bring to trial and who they didn't bring.

Galderma did not bring a single one of the three named inventors, which is I think unusual, and especially I think unusual when there is an inventorship issue that is proposed, because we do believe that there is a terrible inventorship problem with this patent.

Let's talk about infringement. To an extent, this has played a larger role than it probably should in the scheme of things.

Dr. Rudnic had an interesting infringement opinion, which was free of both the Court's claim

construction and he decided not to read Dr. Ashley's or Mr. Ashley's deposition because he thought it wouldn't be interesting.

Now, Dr. Rudnic, like Dr. Webster, is not an independent expert. He was an executive of the company that created this patent. Dr. Rudnic is a colleague of the inventors. So he is really not coming to this as we would hope an independent expert would. He, like Dr. Webster, I believe should be viewed more as a party expert.

I certainly don't discount Dr. Rudnic's ability to create great drugs. That is admirable. I don't think the ad hominums against Dr. Friend are particularly relevant since it's clear from his professional resume that he has been recognized as an outstanding formulation scientist, and he has decided to try to work on addressing the problem of AIDS in the developing world, so I don't think that means that his opinion should be discounted.

Now, let me say on infringement, I think the data speaks for itself. I don't think I need to go over it, except I want to respond real briefly to the point about the proposed facts this is a mistake, and to the extent the mistake is taken as an admission or a waiver, there is always an inquiry as to whether a waiver is knowing and intentional.

This statement is from a part of the pretrial

findings that don't even address the Chang patent, and it's not consistent with the pretrial findings we made on the Chang patent. So I do think the best way to decide the infringement on these two claims is to look to see within the evidence that was presented allows the Court to conclude that the data proves that Mylan's ANDA product will in fact have steady state values that fall between the narrowed values of these dependent claims. I don't think I'm going to go beyond that.

The Court has probably heard enough about .3 and .8.

Well, let's talk about invalidity.

I want to first address two of Dr. Rudnic's points, because one of the questions that we have to deal with is, is this an obviousness invention? Is this novel?

Now, first, Dr. Rudnic said that there was new learning on the absorption window. The new learning was a study that was done. It was actually a very neat study where they had capsules explode at different places in the body in the digestive system to see what the absorption would be.

He said this is why no one else could do it, because they had this undisclosed study; but it's a bit of a puzzling argument to begin with, because the Court has clearly seen that science has known for decades where

doxycycline is absorbed. It's absorbed in the duodenum. One of the things I learned in this trial is how to pronounce "duodenum."

If we can go to the next slide now.

Really, all you need to discount the argument that Dr. Rudnic says is to pull out a calender. On December 17th, 2002, that's the date in which Shire and CollaGenex went forward with the 75 percent/25 percent, and the report from Scintipharma didn't even come out until 2003. There is no testimony that anybody at Shire used that report. So that is really just a posthoc suggestion by Dr. Rudnic. It just doesn't stand up to the most basic scrutiny.

Dr. Rudnic also talked about the Faulding failure and said that this isn't easy because Faulding tried to do this and they failed. Faulding is an Australian company.

But really that is not what Faulding shows, if you look at it. Faulding was attempting a very different and, frankly, a very novel approach, which was to change the absorption site of the doxycycline. It only failed, not because it didn't meet the Chang parameters, Dr. Rudnic admitted it did, it wasn't bioequivalent. It met the Chang patent's blood concentration ranges but it wasn't bioequivalent to Periostat, which meant, as Dr. Rudnic explained, it would have cost more and been harder to have the product approved,

because it wasn't bioequivalent.

Why did CollaGenex try such a strange approach? It's really for the same reason it contracted the work with Shire to work on Oracea: to come up with something it could patent to avoid competition, to protect the Periostat franchise.

An evergreen Periostat, as was candidly expressed here, as Dr. Rudnic admitted, a simple 40-milligram instant release doxycycline tablet or capsule is not going to be patentable.

So I guess we ask ourselves how difficult was this project to come up with this ratio, to come up with the instant release, delayed release?

Mylan's experts, Dr. Rubas and Dr. Friend testified about the relationship between the blood plasma concentrations required by CollaGenex and the ratio of instant release to delayed release that is in the patent.

Now, Galderma says that Dr. Rubas' work should not be credited because he started with a total dose of 40 milligrams of doxycycline, and he knew what the desired blood levels were so he was able to work backward. But, of course, so did Shire. CollaGenex gave Shire all the same parameters that Dr. Rubas received. In fact, they were all in the Ashley patent.

So Dr. Rubas formed his opinion that a person of

ordinary skill in the art could determine this based on exactly the same information that led the Shire people to create their ratio.

Now, Mr. O'Malley yesterday latched on to a phrase I used in my opening statement why I referred to the three to one ratio as the "secret sauce," and I think Mr. Flattmann hit me with it again today. So I want to explain briefly why I used that phrase. It's a story.

When I was in high school, I worked at Jack-in-the-Box. They sold hamburgers, and the hamburgers had what they call secret sauce, and it was a marketing term. The "secret sauce" was just mayonnaise and ketchup. It was Thousand Island dressing.

THE COURT: Are you breaching your employment agreement?

MR. STEUER: I don't believe I ever signed anything except my paychecks for $1.40 an hour.

So among us, amongst the cooks, "secret sauce" was the joke, that you call something this simple and obvious as "the bun" and you call it "secret sauce."

That is really the way I think we should view this three to one ratio. It's really no more original or it's any more special than the sauce I slopped on to the Jack-in-the-Box hamburgers I made a few years ago.

Dr. Rubas and Dr. Friend showed how simple the

process really was. Dr. Rubas showed the vast literature that was available to anyone who wanted to do the formulation. Given the information that CollaGenex provided, Dr. Rubas had no problem coming up with a graph that showed this process.

Dr. Chang said, "So you give to anybody who know the business, they can combination of all this to pick out one they think is suitable for the product." And,

In his e-mail, he referred to this as a straightforward project. That's in Defendant's Trial Exhibit 1094.

We agree with him on that, of course.

I want to discuss another contention that Dr. Rudnic said. This is a contention that you couldn't just do a 40-milligram pill or tablet because it wouldn't have accomplished the goals of the invention because it would be too much. The blood levels would be too much. That is what Dr. Rudnic testified.

That actually, of course, as we discussed, goes against the language of the patent itself which says that 40 milligrams of doxycycline would work, but it's actually confirmed by the PK experiments that were done by CollaGenex on that 40-milligram dose.

They now say that they tested 18 subjects, it was called a 103 study; and we'll detail it in our briefs,

your Honor; and they timed them at all the various time points, half hour, hour, and so forth through 24 hours, and one of the 18 subjects was barely over 1 microgram per milliliter, and it was for only one reading, at the Cmax, and it went right back down.

So, in fact, the data confirms what the patent says, that 40 milligrams would have been just fine, unpatentable but just fine in terms of accomplishing the goal of the invention.

We should note that no one came up with any evidence that the 1.0 level is anything other than a level derived to avoid prior art.

We asked all the witnesses where did you get this 1.0 antibiotic threshold? And they said, well, it's in the literature or somebody told you. What is the literature? I don't know. Who told you? I don't remember.

So I think we would have seen proof of that if it existed. And I really think that's the more likely conclusion that Mr. Ashley drew out of there.

Dr. Gilchrest told us there was no long felt need for this product or any need at all for the combination. I believe the patent itself confirms it, and that is, in fact, the essence of product evergreening.

Now, as Dr. Friend made clear, the incorporating Ashley patent anticipates every element of the Chang patent

expressly or inherently. As I see it, Galderma really fights only on -- though I'm not sure Mr. Flattmann would agree with this, I believe the fight is really joined on the three to one ratio of instant release pellets to delayed release pellets.

Dr. Rubas and Dr. Friend show how that ratio is easily and simply calculated by one of skill in the art from the information available in the Ashley '932 application, and thus was inherent in the publication.

Finally, on invalidity, much is made the fact that prior art previously advanced by Mylan was not part of Dr. Friend's testimony. Well, I will say when we learned that we had 13 hours to fight 45 claims in five patents, it led to wondrous concentration, as Dr. Johnson once said, and we did peel it off.

I do believe that the evidence that we gave the Court is more than sufficient to invalidate this patent, but I don't think there was any concession that the prior art that was not called today was no longer of any use, and, in fact, when Dr. Friend was redirected, he said no, I think this does all invalidate it. So it's a matter of economy, I think.

Let's talk about inventorship. The law is clear here a patent can be invalidated if it has incorrect inventorship.

I know that Mr. Flattmann said it's not a big deal because inventorship can be corrected. It can be corrected, but it doesn't correct itself. They would have to make a motion; and to proceed on the patent, they would have to get an assignment from the inventor. None of that is here at the court, and so the Court is really not in a position to nunc pro tunc correct any inventorship error.

The facts are really quite clear. The three to one ratio or the 75 to 25 percent of IR beads to the DR beads, which may well be the key element of the invention, and, according to Shire, it was not Shire who thought of the ratio.

This e-mail from a senior project manager said it was CollaGenex who picked the ratio, which is what Richard Chang said as well. He said it was picked by CollaGenex, and he said the client is our God. Their God picked this ratio.

We could just as well ask the inventors, and we did, who invented Oracea. Here is what they said:

(Deposition clip played.)

"Question: Did you come up with the idea of a 75 to 25 ratio of IR beads to DR beads?

"Answer: I don't recall.

"Question: You don't recall having done so?

"Answer: I don't recall having done so, yes.

"Question: Okay. But you don't recall coming up with the idea that we ought to pursue 75:25?

"Answer: I don't recall.

"Question: Right. But who first came up with the idea of 75:25? Did it come up from the CollaGenex guys or did you propose it to them?

"Answer: At least I didn't propose. So I don't know who -- who proposed.

"Question: You personally --

"Answer: I personally.

"Question: -- did not propose 75/25?

"Answer: No.

(Deposition clip ends.)

MR. STEUER: So here you have the three inventors denying the invention. Is three to one important? Well, it certainly seems to be because that's the basis for them resisting the Ashley patent application.

I think this is a big problem for Galderma that it really can't overcome. If it argues that the exact ratio is not particularly important or not particularly significant and all that matters is that there was work done on a range of values and that the specific value is not that important, then they really lack the argument that Ashley doesn't anticipate.

However, they have argued that, in fact, it is

unique and special. That really goes to the Purdue Pharma quote they put up there, because Purdue said that a specific settled idea is what we figured to invent here.

Three to one is a specific entitled idea, and Galderma has certainly taken the position that it is. None of the three gentlemen listed on the patent corrected it or claimed it.

The Chang patent, your Honor, we believe is an invalid patent. It should be invalidated. The only thing it accomplished really is to provide market protection for CollaGenex to extend, and what an extension it was. Their Periostat franchise, through a straightforward combination of pellets, serves little purpose other than to protect that franchise.

Your Honor, this is a case about patents, not whether the law is misguided. Under the law here, the patents are not valid. Applying the law, Mylan does not infringe.

THE COURT: Thank you. You both have been very efficient with your time. I will give you a few minutes to rebut one another, if you wish to do that.

MR. FLATTMANN: Thank you very much, your Honor.

Your Honor, we heard about Feldman again, but nothing that was said in my colleagues closing addressed the key issue here. The key issue is was Feldman prior art?

Was it publicly disclosed? There was not a word about that.

Where is the public disclosure in the evidence that was adduced at trial? We have one document, Feldman's patient record, and we know it was kept under lock and key until last year in this litigation, when it first emerged. Until then, none of this was public, and none of it was prior art.

Where was this Westwood Conference in 1998 and 1999, if it really happened? If all this really happened, where is the evidence of it? The law requires corroboration. Where is it?

Our case doesn't hinge on Dr. Feldman's credibility. We certainly believe him when he says that he did not publicize his personal use. We believe him when he says he doesn't know if the patient took the drug.

Counsel made a statement that public use doesn't require a journal article or a publication. Well, here, the problem is that there is no evidence that the drug was ever administered. As Your Honor knows, the claim requires a method comprising oral administration of this drug to an actual patient. So there is a failure of proof here that there is any prior art or any public use, your Honor.

Dr. Webster's testimony was taken out of context at least twice in Mylan's closing. He said that, as to whether patients take their medication, he called that a

deeply flawed assumption, on trial transcript 157 and 158, and explained that much further.

With regard to the claimed ranges that are mentioned in some of his papers, he explained on redirect that those numbers were the available dosages, and he did not believe that he should be treating the disease with 50 milligrams. That's at transcript 168 to 169.

Could you please put up PDX-845.

We showed with Dr. Gilchrest on cross-examination that the additional references that were referenced in counsel's closing, the Plewig reference and Braun-Falco references disclosed antibacterial numbers. That is clear from her testimony and transcript 538 through 539.

With regard to Plewig, she said that the Plewig inventors concluded beyond a doubt that antibiotic activity of antibiotics accounted for the therapeutic benefits.

With the other Plewig article, she agreed that 1,000 milligrams was used, and that was an antibiotic dose.

With regard to Braun-Falco, 1,000 and 1,500 milligrams was used, which was also an antibiotic dose.

So these references, even if they were appropriately considered as part of the body of prior art by the Court, and they should not be, they point in the other direction.

Now, please put up PDX-818.

I was taken to task to some degree in closing for my reading of the Haffajee article. Dr. Chambers took me to task on that as well, I believe.

But the language is plain. It says: The question as to whether the same strains of a given species were resistant pre- and post-therapy to the administered agents or whether new resistant strains or strains resistant to multiple antibiotics had emerged could not be answered.

Dr. Chambers resisted I think the plain meaning of those words and insisted that the Haffajee inventors had found resistance based on some sort of antibiotic activity. That is not in there, and Haffajee is not on Mylan's label.

Now, much was made of Dr. Chambers' testimony on direct that he believed that the Walker 2000 and Thomas article did not support the Mylan label claim.

Well, he said the opposite in his testimony. If you go to his cross-examination testimony on the Skidmore, Walker 2005, Walker 2000 and Thomas articles and transcript cites 612 through 625. He, again and again, agrees with the fundamental conclusions of each of these articles that there is no effect on microflora, that these are subantibiotic amounts. That all four of these studies, these in vivo studies support the Mylan label.

He is cherry-picking around the edges in his direct testimony, and that was revealed on cross when he

agreed with the broad statements of these articles are in the label.

Now, please put up PDX-813.

There is a part of the label that you didn't hear about in Mylan's closing, and that is a part of the label that they can't run from, and that Dr. Chambers couldn't run from. It's the part where they say it should not be reduced from reducing the numbers or eliminating microorganism associated with any bacterial disease.

The reason they can't run from that or address it is because that goes directly to the fact these amounts do not significantly inhibit the growth of microorganisms. That is a match-up. In however many ways they want to parse the other language and say, well, it's not a perfect match-up, there are a couple of qualifying words, et cetera, this is directly reading on that, on your claim construction. That is why you didn't hear about it during the testimony of any of their experts or in the closing.

THE COURT: They say that language is a direction to doctors as to what they should and should not do with the 40-milligram dose and that, therefore, doesn't really say what you contend it says.

MR. FLATTMANN: Well, it's a direction to doctors that this drug is not to be used for reducing the numbers. That is exactly why they're inducing infringement

here, because they're providing this direction to the people who are actually administering the drugs, the people who are the direct infringers, so to speak. That is clear from the law that we cited at the time of the preliminary injunction and we'll cite again in our post-trial briefs.

THE COURT: A direction to a doctor "don't use it for this purpose" is, to you, the same thing as "it will not do the following?"

MR. FLATTMANN: Well, it's a little different. It says it should not be used to reduce. It doesn't say don't use it, it says it should not be used to reduce. So it's saying that this product isn't effective for that; and when read in conjunction with the other admissions in the label that there is no detectable long term of effect on bacterial flora and the other admissions that we've gone through, it would be clear that that is, as a whole, evidence that shows infringement here.

They're directing a doctor that, as administered here, administered in accordance with the label they're promulgating, that they're agreeing to in order to sell this drug, that you will not reduce the numbers or eliminate microorganisms with this product. That is not the intended use. That is not how they're telling doctors and patients to use it. That controls as a matter of law, and they didn't address that.

Now, I think another thing that they did not address or explain was that Dr. Gilchrest admitted that the amount used in the Mylan product is subantimicrobial.

Could you please go to PDX-816.

She admitted that the preferred embodiment, Periostat, does not alter bacterial flora. She called Periostat, the preferred embodiment, a subantibacterial dose.

They didn't say a word about Dr. Gilchrest or put her picture up on the board. That also obviously goes to whether Oracea is covered by the claims, the 20 milligrams twice a day and 40 milligrams of the FDA is comparable.

Now, again, Dr. Gilchrest made this admission, and it doesn't matter that it was made in the context of a different opinion in the case. They can't have it one way for invalidity, or validity, and another way for infringement here.

Now, again, I think it's very important to point out, your Honor, that they're arguing that the preferred embodiment is not included within the invention. They're saying that Periostat -- not Dr. Gilchrest but Mylan's counsel and Mylan are saying that Periostat is not a subantibacterial amount. Well, Periostat, as the named preferred embodiment, is presumed to be included within the scope of these claims.

Now, with regard to Amin, I just have a few short points. They suggested that there might have been some reason why we didn't call a rebuttal expert, Dr. Rhoads. Well, we hardly need to call a rebuttal expert if their expert says that none of his art anticipates.

They rely on inherency, supposedly, but their expert said explicitly that none of the eight references anticipated inherently or directly. He said there was no express or inherent disclosure in any of those references of nitric oxide or iNOS. Since they already dropped their obviousness defense, there was hardly any reason to refute or rebut what he had left to say. He had already done in his own references.

They say it's all inherent, but they also say it's not enabled. I suggest that that is impossible contradiction in their arguments before the Court.

As to Chang, I was incredibly surprised to hear that they now think that their proposed facts in the pretrial order were a mistake. Well, if they were a mistake, why did Dr. Chambers agree to them when I asked him those questions on cross-examination? Why did Dr. Friend accept those numbers when he was asked those questions? The Chambers admission is telling. And the trough concentration of Mylan's drug doesn't depend on what patient Mylan is arguing about at the time.

Now, in terms of Dr. Rudnic, there was a

suggestion that he didn't read the claim construction or apply it. I think that was clarified in his redirect at transcript 256 and 257 where he explained just the opposite.

Now, I was also surprised to hear now, even in the closing argument, they have proposed yet another new theory concerning why the Chang patent is invalid involving some sort of testing some document. We didn't hear a word about that at trial. Who testified about that?

We also heard secret sauce is some sort of a joke. Well, they couldn't find it. They couldn't find this supposed joke anywhere in any of the formulation art of this three to one IR to DR ratio.

As to inventorship, Your Honor, certainly if you bought their theory on inventorship -- and I don't think you should without the authority to add Ashley. It's not a problem. Ashley has already assigned his inventions to CollaGenex, and CollaGenex was bought by Galderma, and there is nothing in the statute that would preclude you from doing that if you felt it was appropriate, but there is absolutely no need to do so.

The people who put the secret sauce into the formulation were undeniably the Chang inventors. Their testimony on that issue and Dr. Chang's testimony on that issue was very clear. He testified that although these numbers may have existed and may have been part of the wish

list that was given to him by CollaGenex that they were meaningless until he made them a reality. Dr. Chang created the special sauce, and he created the formulation with his co-inventors, and no one else did before them, and they're unable to point to any evidence of that.

Thank you, your Honor.

THE COURT: Thank you very much.

Mr. Steuer, you can have the last word, if you wish.

MR. STEUER: Thank you, your Honor. I have not much more than the last word. And the last word is that Robert Ashley did not claim that he was the inventor of the three to one. So I think it would be a remarkable act of the Court, as invited by Galderma, to name Robert Ashley an inventor when he didn't even testify that he was the person at CollaGenex that came up with Oracea.

I believe on that, the record is clear. It was someone at CollaGenex. It might have been Ashley, it might not have been Ashley, but whoever that inventor is who came up with this ratio that the plaintiff relies upon was not any of the three gentlemen named on the patent.

THE COURT: Thank you. I thank both sides for your efficient and effective advocacy, and your efficient use of time. We'll look forward to receiving your briefs later this month, and we'll take these issues under

advisement.

Safe travels to all of you.

(The attorneys respond, "Thank you, your Honor.")

(Trial proceedings end at 11:45 p.m.)

I hereby certify the foregoing is a true and accurate transcript from my stenographic notes in the proceeding.

/s Brian P. Gaffigan
Official Court Reporter
U.S. District Court